

Application No. 10/549936
Responsive to the office action dated July 23, 2009

REMARKS

Favorable reconsideration of this application is requested in view of the following remarks.

Claim 1 has been amended to include all limitations of original claim 2 and previously presented claim 22 and further amended as supported by the specification, for example, examples A1-A5 at page 14, lines 14-23, page 15, lines 25-32, page 16, lines 15-22, page 17, lines 5-14, and page 17, line 37 – page 18, line 7, in which the film-forming solution is applied once on the glass substrate and cured once, i.e., the film is a single-layer and outermost-layer film formed directly on the substrate. Accordingly, claims 2 and 22 have been canceled without prejudice, and withdrawn claim 25 has been amended to correspond to claim 1. Claim 27 has been canceled without prejudice. Claim 29 has been added as supported by the specification, for example, at page 13, lines 32-34. Claim 30 has been added as supported by previously presented claim 1 and original 2 and the specification, for example, at page 13, lines 32-34. Claims 1 and 3 have been amended editorially.

Claims 1, 7, and 22 have been rejected under 35 U.S.C. 102(b) as being anticipated by Arpac et al. (International Application Publication No. 99/5264), to which English equivalent U.S. Patent No. 6,620,514 is referred. Applicants respectfully traverse this rejection.

Arpac discloses a method for producing layers including alkoxysilane (see abstract of U.S. 6,620,514). The reference, however, fails to disclose that the thickness of the organic-inorganic composite film is more than 250 nm and no more than 5 μ m as claim 1 recites. Accordingly, claim 1 and claim 7, which depends from claim 1, are distinguished from Arpac, and this rejection should be withdrawn.

Added claim 29, which depends from claim 1, and claim 30, which recites the same thickness requirement for the organic-inorganic composite film as that in current claim 1, are distinguished from Arpac for at least the same reasons as discussed for claim 1 above.

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Claims 1-5, 7, 9, 10, 22, and 27 have been rejected under 35 U.S.C. 102(b) as being anticipated by Mennig et al. (International Application Publication No. 01/30922), to which English equivalent U.S. Patent No. 6,855,396 is referred. Applicants respectfully traverse this rejection.

Mennig discloses an abrasion-resistant diffusion barrier coat system, which comprises a hard basecoat layer and a topcoat layer (see coln. 2, lines 18-28 of U.S. 6,855,396. Hereinafter, the citations of Mennig are those of the '396 patent). Thus, the barrier coat of Mennig is a combination of the two layers and is not a single-layer film as claim 1 recites. Even if the two layers were considered separately, in the basecoat of Mennig, a content of an element in the coating composition such as Si is preferably no more than 20 mol %, and particularly, no more than 10 mol % of an overall amount of the hydrolysable silane compound (see coln. 3, lines 7-20). Thus, the reference fails to disclose the organic-inorganic composite film that contains the silica as its main component in the film, i.e., the basecoat. Further, the basecoat of Mennig is covered by the topcoat layer (see coln. 2, lines 18-28). Thus, Mennig further fails to disclose that the organic-inorganic composite film, i.e., the basecoat, is an outermost layer as claim 1 recites.

With respect to the topcoat layer, Mennig discloses that the topcoat layer is formed on the basecoat layer (see coln. 2, lines 18-28), and thus the topcoat layer is not formed directly on the substrate, which is a glass, as claim 1 recites. Accordingly, claim 1 is distinguished from Mennig. Accordingly, claim 1 and claims 3-5, 7, and 9-10, which ultimately depend from claim 1, are distinguish from Mennig, and this rejection should be withdrawn.

With respect to added claim 29, the claim, which depends from claim 1, is distinguished from Mennig for at least the same reasons as discussed for claim 1 above. In addition, the claim recites that a hydrophilic organic polymer included in the organic-inorganic composite film is a polyether phosphate surfactant. Mennig merely discloses inclusion of a surfactant as an additive of the basecoat layer (see coln. 6, lines 32-41) but fails to disclose that the surfactant is a polyether phosphate surfactant. Thus, claim 29 is distinguished from Mennig also in this respect.

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Like claim 29, claim 30 recites that the organic-inorganic composite film includes a polyether phosphate surfactant as a hydrophilic organic polymer. Accordingly, claim 30 is distinguished from Mennig.

Claim 11 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Mennig et al. (International Application Publication No. 01/30922), to which English equivalent U.S. Patent No. 6,855,396 is referred, in view of Bock et al. (U.S. Patent No. 6,020,419). Applicants respectfully traverse this rejection.

Claim 11, which ultimately depends from claim 1, is distinguished from Mennig for at least the same reasons as discussed for claim 1 above. Bock fails to disclose a single layer of the organic-inorganic composite film that contains silica as its main component, that is formed directly on a glass substrate, and that is an outermost layer as claim 1 recites. Accordingly, Bock does not remedy the deficiencies of Mennig, and this rejection should be withdrawn.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance.



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DPM/my/jls

Respectfully submitted,

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